

IN THE CLAIMS

The following listing of the claims is provided in accordance with 37 C.F.R.

1.121:

1. (currently amended) An apparatus with a self heating feature comprising at least one conductive component of the apparatus comprising conductive composite having electrodes at edges and a face of the conductive composite extending between the edges, wherein the at least one conductive component is adapted to couple with a source of electricity, and wherein the at least one conductive component heats up on passage of electricity, wherein the conductive composite is a thermoformable component comprising:

an organic polymer; and
a nanosized conductive filler.

2. (original) The apparatus of claim 1, wherein the conductive component further comprises an insulating layer at least partially covering the conductive composite to prevent leakage of electrical current to surrounding components or user of the apparatus.

3. (original) The apparatus of claim 2, wherein the heat generated by the at least one conductive component is used for at least one of: preventing condensation on or in proximate regions of the conductive component 20, water evaporation on or in proximate regions of the conductive component 20, heating matter (such as water, or air) in contact with the at least one conductive component 20, preventing frost formation and assisting in drying materials placed in proximity of the at least one conductive component.

4. (original) The apparatus of claim 2, wherein the apparatus is a refrigerator.

5. (original) The apparatus of claim 4, wherein the conductive component is at least one of: an ice dispenser, a duct door, a water evaporation tray, water evaporation tray, a front plenum or a rear plenum, freezer compartment, a body of a refrigerator door mounted storage compartment, a door of a refrigerator door mounted storage compartment and a body of an ice tray of the refrigerator.

6. (original) The apparatus of claim 2, wherein the apparatus is at least one of:

a fluid dispenser and wherein the conductive component is a part of the fluid dispenser;

a thawing compartment, and wherein the conductive component is at least one of a body or a door of the thawing compartment; and

an in-line fluid heater, and where in the conductive component is a passage of the in-line fluid heater.

7. (original) The apparatus of claim 2, wherein the apparatus is an air conditioning unit and wherein the conductive component is at least one of the set of an exit louver or an air inlet panel of the air conditioning unit

8. (original) The apparatus of claim 2, wherein the apparatus is at least one of a cloth washer or a cloth dryer, and wherein the conductive component is at least one of the set of a drum of the at least one of the cloth washer or cloth dryer.

9. (original) The apparatus of claim 2, wherein the apparatus is a dish washer, and wherein the conductive component is at least one of the set of a dishwasher tub, a dish rack or door of the dish washer.

10. (original) The apparatus of claim 1, wherein the conductive composite is formable.

11. (original) The apparatus of claim 10, wherein the conductive composite is injection moldable.

12. (canceled).

13. (canceled).

14. (currently amended) A method for providing heating in an apparatus comprising:

heating at least one conductive component of the apparatus, wherein the heating is done by passing an electric current through the conductive component, and wherein the at least one conductive component comprises a conductive composite having electrodes at edges and a face of the conductive composite extending between the edges, wherein the conductive composite is a thermoformable component comprising:

an organic polymer; and
a nanosized conductive filler.

15. (original) The method of claim 14, further comprising at least partially insulating the conductive composite by an insulating layer.

16. (previously presented) The apparatus of claim 1, wherein the conductive composite further comprises carbon fibers.

17. (previously presented) The apparatus of claim 16, wherein the diameter of the carbon fibers is greater than 1000 nanometers.

18. (previously presented) The apparatus of claim 1, wherein the conductive composite further comprises graphite.

19. (previously presented) The apparatus of claim 1, wherein the organic polymer comprises thermoplastic resins, or thermosetting resins, blends of thermoplastic resins, or blends of thermoplastic resins with thermosetting resins.

20. (previously presented) The method of claim 14, wherein the conductive composite is processed via melt blending, or solution blending, or combinations thereof.

21. (previously presented) The method of claim 14, wherein the conductive composite is injection moldable.

22. (currently amended) An apparatus with a self heating feature comprising at least one conductive component of the apparatus comprising conductive composite having electrodes at edges and a face of the conductive composite extending between the edges, wherein the at least one conductive component is adapted to couple with a source of electricity, and wherein the at least one conductive component heats up on passage of electricity, wherein the conductive composite is a thermoformable component comprising:

an organic polymer;
a nanosized conductive filler; and
carbon fibers or graphite.